LOUISIANA Conservationist

LOUISIANA WILD LIFE AND FISHERIES COMMISSION

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Conservation Pledge

I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country—its soil and minerals, its forests, waters and wildlife

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Shrimp represent one of the most important items in Louisiana's commercial fisheries industry. In 1963 the State had an exceptional shrimp production with total catch in excess of 83 million pounds, heads-on weight. Production was equivalent to the best year for which there are records and exceeds the 20-year average from 1939 to 1956. Here, freshly caught and iced shrimp are loaded into refrigerated storage bins aboard a lugger and later will be unloaded at freezer or processing plants in the first step toward widespread national distribution.

(Photo by Jack Britt)

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LOUISIANA WILD LIFE AND FISHERIES COMMISSION

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EDITORIAL

AT THIS TIME of the year when there is much interest in sport fishing and participation in the various fishing rodeos held throughout the summer in both saltwater and freshwater, it would be well to take a glimpse at the importance of the commercial fisheries of Louisiana.

There is one certainty that sport fishing is closely linked to commercial fisheries by a strong bond. Sport fishing cannot be good where commercial fishing is not a major industry.

In one instance, thousands of sportsmen of all ages find excellent outdoor recreation in the form of angling in both freshwater and saltwater. At the same time, thousands of persons derive a livelihood from the abundance of Louisiana's fisheries resources.

It follows, too, that many other industries including ice and freezer plants, packing concerns, transportation companies, boat and marine supply companies and marketing chains all have a vital stake in this important industry based upon fisheries resources.

There is also the certain fact that income from persons engaged in commercial fisheries finds its way into many unrelated retail outlets and additional thousands of persons benefit from the diversified and highly productive fisheries resources.

As sport fishermen we sometime overlook the overall importance of Louisiana's commercial fisheries; however, both sport fishing and commercial fishing move hand in hand.

To emphasize this, I would like to point out that the total value of commercial fisheries in Louisiana ranges anywhere from $75 million to $100 million annually. Harvesting our waters is the principal source of income for more than 50,000 persons in the state.

For the record, Louisiana produces over a billion pounds of menhaden, 80,000,000 pounds of shrimp, 10,000,000 pounds of oysters, 15,000,000 pounds of freshwater commercial fish, 5,000,000 pounds or more of crawfish and several million pounds of saltwater fish and crabs.

It is evident that Louisiana's commercial fisheries is on a par with many important agricultural crops.

Shrimp is perhaps the most important single fisheries product of the state, in that it involves the greatest number of persons both directly and indirectly associated with shrimping.

It is too early in the year to make any accurate prediction of total shrimp production for this year. We can look back upon last year with pride and hope that this year and future years will be as gratifying to all who are engaged in shrimping.

J. D. HAIR, JR.
Director

The present shrimp research program of the Louisiana Wild Life and Fisheries Commission has now reached the stage where it will be possible shortly to predict the shrimp harvest annually. The research program at Grand Terre is geared to that end and the laboratory is also continuing to expand its research to include other forms of saltwater marine research.

We now have one of the finest research laboratories in the country and the knowledge gained in the passing years will be of great economic benefit to the people of Louisiana.

Research is not confined to saltwater alone. In our inland lakes and rivers, the Commission has research programs in action which will serve to increase freshwater fisheries production.

Far from the least of our resources closely associated with fisheries is the growing commercial production of crawfish. What was once considered merely a recreational pursuit has now become big business in Louisiana. Several million pounds of crawfish are now finding their way into national markets. Crawfish farming is growing by leaps and bounds and as production for commercial purposes increases, the demand for Louisiana crawfish is growing.

To provide some idea of the importance of commercial fisheries, it might be well to point out that figures assembled by the Commission two years ago revealed that Louisiana's gulf fisheries alone represented an outlay of about $85 million. The overall picture at that time showed a value of around $266 million invested in equipment alone. This figure has been steadily growing. The number of persons associated with the industry, either indirectly or directly, has also been constantly growing. There is little doubt that commercial fisheries is big business. *

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LOUISIANA RIG FISHING

Dan Hardesty*

CAN YOU IMAGINE seeing a "FISH HERE" sign, perhaps as big as a three-story office building, standing in an otherwise open expanse of water?

There are many of them in Louisiana's offshore waters, and they mark the spots at which you can catch an infinite variety of fish.

To be sure, they aren't really big signs. They're oil rigs. But to the Louisiana angler, those great black structures—some alive with noise and activity, others standing silent and alone—mean fish, just as clearly as if it were spelled out in neon lights with a big blinking red arrow pointing to the water round their many iron feet.

Among the men in the oil businesses for the numerous companies which do offshore drilling in the Gulf of Mexico, the structures are usually referred to as "platforms". But to the fishermen, and the general public, they are "rigs," and Louisiana's "rig fishing" is a highly productive form of the sport enjoyed by thousands annually.

Every fisherman knows that fish are to be found in locations which provide some form of two basic essentials—food and protective cover. Fish like a place to hide. This is particularly true of the little ones, which serve as the main course for the bigger ones at lunchtime.

When protective cover is available, the tiny fish take advantage of it so as to be able to hide at least part of the time from the bigger fish. And the bigger fish move in after them—followed by still bigger fish in another example of the balance of nature.

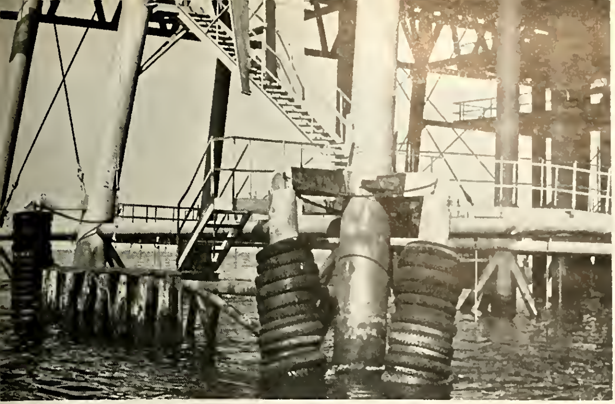
When oil companies began erecting the big drilling platforms in the Gulf of Mexico, it was soon discovered that fish in a vast variety were moving in to live among the big legs and pilings and cross-supports of the structures. And right behind them came the fishermen.

In many coastal localities, it is necessary to engage in the messy business of "chumming" to enjoy much success at saltwater fishing. (This involves throwing overboard a quantity of ground-up fish to lure the fish to the vicinity of the boat.) In Louisiana coastal waters, you just head for a rig.

Boats of almost as great a variety as the fish may be seen fishing the rigs, and it's a good family sport. Where else can the little ones get enough "action" to keep them interested through several hours of fishing?

Some of the rigs are only six or seven miles from small-boat docks, and on calm days it can get crowded around the more productive structures. The trend in recent years to bigger pleasure boats and bigger outboard motors has given rig fishing a boost, and many an angler on a large charter boat has been surprised to see a speed hull come racing up to a rig as far as 20 miles from

Executive Sports Editor of the Baton Rouge STATE TIMES



Steel cushioned with used automobile tires forms a bumper-soft mooring spot for crew boats and boats bringing supplies and pipe to offshore drilling platforms. When not being used by petroleum operators, these spots are extremely inviting for gulf fishermen. As long as sport fishermen do not hamper oil-drilling operations, they are welcome to moor alongside the structures.

land.

Such venturesome anglers must, of course, keep a close eye on the weather. Generally, their boats are equipped with twin outboards, and for the more distant trips, traveling in pairs is sound practice.

To fish a rig, it is necessary to "tie on" to the rig. Boats are never anchored at the rigs because of the danger of the anchor line becoming entangled with the lower structure, which in many cases slants outward and is actually under the boat. The rig must be approached with great care, and of course the boat must be tied so that it will swing free away from the structure on current or wind and not bang against it.

There are three basic types of rig fishing, and two of them are done with the boat tied to the rig. These are bottom fishing and casting.

Bottom fishing is basically similar to the method used by the small boy fishing three feet deep with cane pole and line for bluegills, using the tight-line method without a cork. You lower the bait to the bottom, and when you feel a tug at the bait, you yank up on the pole. The difference is that in rig fishing, you use a rod and reel, you fish not three feet deep but maybe 30 or even 100 or more, and there is just no tellling what you may catch.

This suspense of wondering what form of finny creature or monster of the deep will grab your bait next is one of the thrills of rig fishing. It may be anything from a small trout to a large shark or even a manta ray.

The fishing tackle used in bottom fishing varies mainly with the sporting instincts of the anglers. Generally, the rod is heavy and not too long, the reel is sturdy, and the line ranges upward from 30 pound test. Pulling a big fish up from the deep requires stouter tackle than handling the same fish in a surface fight, and most of this type of angling is more meat fishing than sport fishing anyway.

For bottom fishing, the line must be rather heavily weighted to carry it down through the current, which is another reason for the heavy tackle. With light tackle, it may be very difficult to feel the fish at your bait if you have several ounces of lead on the line.

Bottom fishermen often use a tandem-hook arrangement, which occasionally means two fish at once. Perhaps the biggest advantage, however, is that you have two baited hooks way down there and you don't have to crank the line all the way up to see if you've lost your bait the first time you feel a "bite" and fail to set the hook.

Cut-up fish is the bait generally used for bottom fishing.

An altogether different form of sport is to be found in casting around the rigs. For this, light tackle is used, and the true sportsman can have a ball.

Great schools of bluefish and Spanish mackerel sometimes churn the water around the rigs. Casting artificial lures among them, with light spinning tackle, can produce a strike on every cast. And nothing you've seen in freshwater fishing fights like these fellows, pound for pound.

The bluefish, in fact, don't always give up even after they're in the boat. They have been known to bite the hand of more than one angler careless in removing the hook.

The chief target at the rigs in summer months is the cobia, a large fish which is relatively easy to land on light tackle. They may be seen swim-

Bottom fishing is usually the approved type of fishing the rigs during the summer months. Through the structure of this platform in the gulf another similar one can be seen in the distance.

ming leisurely around the boat, and where there is one there will almost surely be more. When one is hooked, the angler should be in no hurry to boat it. If other cobra are present, they will swim near the hooked one and other fishermen may cast and hook them. But if the first fish is pulled quickly from the water, the others almost invariably swim away. Like most of the fish caught at the rigs, they are highly edible.

Sometimes, a rig-fisherman will experience a sudden halt in the fight being put up by his catch, and he will reel in half a fish. This may mean the work of bluefish, which have powerful jaws that can chop up another fish their own size. Or it could be sharks or barracuda, both found in considerable numbers in this area.

The third type of rig fishing is trolling, with two to four lines trailing astern. The trick here is to troll the lines as close by the rigs as possible without hooking one of the legs. The quarry in this sport is generally king mackerel, although Spanish mackerel and Bonita also are caught in this manner.

The fish which are caught around the offshore rigs include practically everything except big game fish. And the season runs 12 months a year, governed only by weather and by seasonal migrations of some types of fish.

Easily the year-round favorite is snapper, such a great table delicacy that it is almost impossible to cook it in a way that isn't good. Many people have the notion that snapper is always baked or broiled. Truth of the matter is that it may be better fried than any other way!

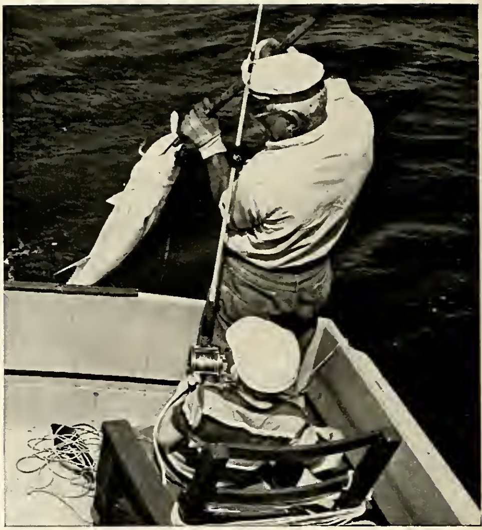
As a general rule, snapper are caught by bottom-fishing, either at a rig or one of the many "snapper banks" which Louisiana's coastal fishermen have found. But occasionally great schools of these fish are found within a few feet of the surface, and then the angler may switch tackle and meat fishing turns into red hot sport fishing.

Among the fish caught around the Louisiana offshore rigs, in addition to those already mentioned, are grouper, white trout, redfish, spadefish, jewfish (giant sea bass), pompano, and occasionally speckled trout (spotted weakfish).

In the winter months, an icebox full of pompano is the goal of every angler in the area. This is a fish which requires some looking-for, as it may be around one rig today and another tomorrow, but the search is worthwhile for this most delicious fish.

The rigs which help make all this fishing possible come in many sizes and shapes. Some are quite small, and others are enormous. Some stand silent in the waves, and the angler who has tied his boat to one of those may feel almost as if he has come across some long-abandoned structure, put there years ago to wait his fishing pleasure.

At other rigs, the angler may get the feeling that he has tied his boat in the middle of the proverbial boiler factory. Workmen may be actively engaged in drilling for oil, a crew boat may rush up with a change of personnel, helicopters may come and go, oil pumps and assorted heavy ma-



Here a young angler in the fighting chair has hooked and played a hard-fighting jackfish. At gaff time, he receives the assistance of a seasoned angler. Jackfish are known to be hard fighters and, while considered a nuisance by most gulf fishermen, they are game fish and put up a fierce battle.

Rig fishing, more properly known as fishing near the numerous oil and gas drilling platforms in the fringe of coastal waters from the Texas line to the Mississippi State line, offers sport fishermen four distinct types of angling, all of them highly productive. Here, an angler tries his hand at trolling. Other forms of fishing are "drift" fishing wherein favorable currents carry the bait toward the petroleum platform, and mooring to the platform itself, casting and bottom fishing.

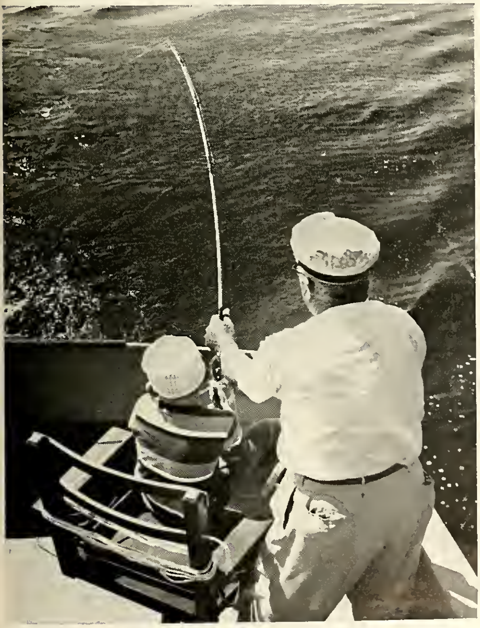
chinery may be noisily at work, and in some cases, a booming foghorn may sound its warning roar every few seconds. As might be imagined, this will not be the ideal rig for a fishing boat.

Some of the rigs are in water only about 30 feet deep, and the more distant ones have their huge black legs planted well over 100 feet below the surface. In almost all of this area, the ocean bottom is gray mud.

As a general rule of thumb, the rigs fairly close to shore are known to Louisiana saltwater anglers by geographical location—perhaps because they tend to be in clusters—while those far from land are known by a numerical designation. Thus the "Caminada Rigs" are the group of structures not far off the southwest end of Grand Isle, while "Rig 19" is a single large and lonely platform some 18 miles south of Grand Isle.

One which has its own special identity—and purpose—is the Sulphur Rig. It is very different from the others, as it is actually a single long structure roughly a quarter of a mile long. It is located atop a vast deposit of sulphur, some seven miles south of Grand Isle. Not much rig fishing, as such, is done at this rig, but large schools of mackerel and other fish are found frequently by trolling a short distance on the island side of the long structure. And sometimes, tarpon may be found here.

Fishermen often wonder at the differences in size and design of the oil rigs. Actually, they serve many purposes. Some are drilling rigs, some are storage rigs, some are mere pumping stations, and a few are "crew platforms" where a dozen or so men live in comfortable air-conditioned quarters much like those on a large ship. And do these crewmen fish from their rig in their off-duty hours? Yes indeed they do, and there is never any shortage of fresh-caught fish for the crew cook. (Actually, these crews are better fed than most folks ashore, and they fish for fun as much as food.)



The slogan "Take a Boy Fishing" takes on double meaning in fishing near the offshore oil drilling platforms. It also means catching fish. Few anglers venturing out into the gulf return empty-handed. They can usually count on angling action. The catches may vary from day to day, but the fish are there in astounding numbers.

Rig fishing is fine along the entire Louisiana coast and in the large bays and coastal lakes. Here, at Grand Isle, one of the charterboat skippers tries his luck at bottom fishing. Depending on the time of the year, he may catch any of a wide variety of saltwater fish.

Although there are rigs all along the Louisiana coastline, most of the rig fishing centers around Grand Isle and Empire.

Grand Isle, a windblown, sandy strip some seven miles long, is connected to the mainland by a bridge, and easily reached over an excellent highway which extends down through the colorful country alongside Bayou Lafourche and on across the last few miles of desolate marshland.

There are docks with small-boat launching facilities at both ends of Grand Isle, and the angler with his own boat may obtain fuel, ice, water, food and bait.

Grand Isle's charter boat fleet operates from the northeast end of the island. Boats are almost always available for charter on weekdays, although it is usually necessary to make reservations for weekend charters, particularly in the warm months.

Rates range from about $60 to over $100 for parties of six, depending on the distance to be traveled—which usually is dictated by which rig the party wishes to fish. Several of the boats take larger parties, with an additional charge for each one above the minimum.

Grand Isle has several motels and restaurants, not in the luxury resort class, since this is more of a "fishing island" than a resort. Steady progress has been made in recent years in regard to accommodations on the island, and this is expected to continue. A big boost in this direction was provided last year when a long-awaited fresh water system from the mainland was completed and put into operation.

Empire, a small town on the West side of the Mississippi River below New Orleans, actually isn't on the Gulf. The Empire charter fleet, and the many privately-owned small craft which operate from there, must go through the Empire Canal to reach the Gulf. This is some nine miles through marshland, and once in Gulf waters, there are oil rigs scattered everywhere.

Oddly some of the best snapper fishing at Empire is done in open water, and on occasion it is fabulous. But even then, the rigs serve an essential purpose. The charter skippers use them for navigation and for landmarks in locating their "fishing hole" in the open water, by visually lining up several rigs in known directions. Otherwise, it's normal rig fishing, and the Empire boats frequently make 40-mile runs to deep-water rigs.

Charter fees at Empire vary with the locality fished, and generally range from about $80 to $115. For the man with his own boat, there is a marina right alongside the charter boat dock. Motels and restaurants are available not far from the dock.

Visitors who lack fishing tackle, or fresh water anglers who have no heavy tackle, will find that many of the charter boats furnish some tackle and all of them have more available for rental at very reasonable fees. And regular fresh water bass tackle serves splendidly for salt water casting, although it is too light for trolling and you risk losing it on a monster bottom fishing.

And there are some monsters lurking among the great legs that support the rigs off Louisiana's coast. If you've any doubts of that, just throw a line down there and see for yourself. ✠

Here a charterboat deck hand prepares to put a mooring line over a cross beam on an offshore drilling platform.

Fishing around the offshore platforms produces plenty of action, with different species being caught at different seasons of the year. The angler on the left holds a hefty grouper while the angler on the right holds a red snapper. Groupers and snappers are generally found on the bottom near the platforms. Groupers run as high as 150 pounds and the record red snapper for the state is a 74-pounder, caught by Jim Meriwether of Shreveport while fishing off South Pass in October, 1963.

From November through February, when most outdoorsmen have shotguns and game on their mind, the "pompano parade" begins in Louisiana and catches of these prize fish are made all along the eastern Louisiana Gulf Coast. This catch of pompano and lemonfish (cobia) was made by William Wagner, Jr., Roy Copeland and Murry Thompson, all of New Orleans.

COMMISSION NAMES NEW OFFICERS

J. D. HAIR, JR.

J. D. Hair, Jr., Baton Rouge businessman, sportsman and civic leader, was named director of the Louisiana Wild Life and Fisheries Commission at its regular monthly meeting May 26. He succeeds L. D. Young, Jr., publisher of the Port Allen West Side Journal who served as director for a total of eight years.

In other commission action, Ray Whatley of Alexandria was elected chairman of the commission, replacing A. J. Buquet, Houma.

John E. Kyle, Jr., Berwick, was named vice-chairman of the commission, replacing L. Richard Fleming, Shreveport, whose term which ran concurrent with that of former Governor Jimmie H. Davis expired when Governor John J. McKeithen was inaugurated on May 12.

Hair is a native of Winnsboro but has been a resident of Baton Rouge since returning from service in the U. S. Navy in World War II. He established himself in business in 1946, becoming an executive of the Hair Flying Service in Baton Rouge.

As an active sportsman, he is deeply interested in wildlife and fisheries management and the important role that wildlife resources play in the economy of Louisiana at both recreational and commercial levels.

Immediately after taking the oath of office, Hair announced that he would do everything possible to further the interests of the Louisiana Wild Life and Fisheries Commission.

Chairman of the Commission Ray Whatley was appointed to the Louisiana Wild Life and Fisheries Commission June 5, 1956, by the late Governor Earl K. Long. He is an ardent sportsman and conservationist and one of the prime movers behind the New Orleans Big Game Fishing Club which pioneered big game fishing out of South Pass, focusing national and international attention on Louisiana's gulf fishing.

The new Vice-Chairman, John E. Kyle is an industrialist whose hobbies are hunting, fishing and working for conservation programs. He played an important part in freeing the chlorine loaded barges which had sunk in the Mississippi River near Natchez, presenting a threat to both humans and wildlife. ✠

RAY WHATLEY

JOHN E. KYLE, JR.

The Louisiana Boat Launching Ramp Program

BOAT LAUNCHING RAMPS—entree to aquatic pleasure!

Louisiana fishermen and boaters have been, for a long time, in a situation similar to that of the small boy with his nose pressed against the pane of the candy store window. They've been on the outside looking in.

A great deal of the 3,361 square miles of fresh water in the state has been largely unavailable to sportsmen simply through lack of access. We've been unable to take full advantage of this natural bounty—five times the national average—because of this deficiency.

The same is true of great stretches of our coastline, which boasts more than a thousand miles of irregulation configuration that's ideal for aquatic life and for boating activities.

The end to the problem is not in sight, but the Wild Life and Fisheries Commission—in cooperation with other State agencies—is making a three-quarter million dollar dent in it.

The opportunity to make progress in this direction came last year when Congress passed Public Law 87-658, the Accelerated Public Works Program to provide employment relief in economically-distressed counties throughout the nation. A total of $365,000 of this money has been allotted by the Commission for construction of public boat launching ramps throughout the state.

An equal amount of state money must be added to the A.P.W. funds under this program—50 percent federal and 50 percent state, so the total available for ramp construction came to $730,000. The Wild Life and Fisheries Commission provided most of this matching sum, but the Louisiana Department of Highways provided a substantial portion to get the program under way.

Why did the Commission place this much importance on boat ramps?

First, because a tremendous number of Louisiana residents use our lakes, streams and coastal waters. Consider, for instance, that more than 200,000 resident fishing licenses were sold in the 1961-62 season, an all-time high. Knowing that only a small percentage of the fishermen in Louisiana are required to buy a license, we can conservatively guess the actual number of anglers in the state at about one million.

Boating itself has soared in popularity, and since the advent of the boat registration law we have an indication of its magnitude. As of last June a total of 58,947 outboards were registered with the Commission, plus another 10,662 inboards—a total of almost 70,000. These figures assume added significance when we consider that no boat powered by a motor of 10 hp or less need be registered.

This surge to water-oriented recreation has been a national one, with the number of recreational boats in use in the U.S. soaring from 2,440,000 in 1947 to a whopping 8,025,000 in 1960. Water skiing was a novelty at the end of World War II, but now more than six million people ski. The number of anglers is increasing twice as fast as our population.

Public use of the boat launching ramps which have already been completed, such as this one at Bermuda Bridge on Cane River, has been high.

The Commission considered these statistics, but also took into consideration future needs as outlined by the Outdoor Recreation Resources Review Commission. In 1962, following a comprehensive three-year study, this Federal group predicted that: 1. fishing will increase 35% by 1976, and 100% by the year 2000; 2. boating will increase 80% by 1976, and 250% by the year 2000; and 3. water skiing will increase 120% by 1976, and 400% by the year 2000.

These estimates are a nationwide average, including many states which have little water for boat-connected activities. It is logical to assume that Louisiana, with her exceptional array of lakes and streams, her shoreline location, and her temperate climate, will experience an increase in fishing, boating, and water skiing considerably higher than the national average.

In considering the need for boating facilities the Commission also recognized the value of them to the commercial interests concerned with our aquatic resource, since free and easy access is important to commercial fishing, shrimping, and trapping.

Waterfowl hunters have a sizeable stake in this ramp program, since their sport is directly dependent upon access.

The entire A.P.W. program was of federal origin, directed toward bolstering the economy in economically depressed areas, and as such it was a crash program in nature. When the A.P.W. funds became available the Commission had only a very short time in which to allocate them. For this reason a majority of the ramps proposed are for some body of water with no particular site available. Had this course not been followed the time limit for obligating the A.P.W. funds would have expired and the money would have been lost.

The Department of Highways had provided for access sites at strategic points where state highways cross waters, and built the first 13 launching ramps and parking areas under the A.P.W. program. It provided much of the matching funds for these, and also handled the engineering, advertising for bids, and supervision of construction in this phase of the project.

Ramps Completed by Department of Highways

Parish	*Lake*	*Date Completed*	*Type*	*Parking Acreage*
Allen	Calcasieu River (Oberlin)	11/16/63	Shell	½
Ascension	Amite River (Port Vincent)	10/ 3/63	Concrete	½
Ascension	Bayou Francois	10/ 3/63	Shell	⅓
Calcasieu	Prien Lake	11/16/63	Concrete	1¼
Catahoula	Ouachita River (Harrisonburg)	11/19/63	Shell	1
Franklin	Bayou Macon	11/19/63	Shell	1
Lafayette	Vermilion River	11/22/63	Shell	1
Natchitoches	Sibley Lake	11/ 8/63	Concrete	1
Natchitoches	Cane River Lake	11/ 8/63	Shell	1
Calcasieu	Lake Charles	11/16/63	Concrete	1¼
Allen	Whiskey Chitto	11/16/63	Shell	¾
Allen	Calcasieu River (Oakdale)	11/16/63	Shell	¾
Vernon	Anacoco Lake	11/ 8/63	Shell	1

While the above ramps were under construction, 14 others were programmed for construction under the supervision of the Department of Public Works. Three of these are virtually completed —on Lake Dauterive in St. Martin parish, on Bayou Benoit in St. Martin parish, and on Half-Moon Lake in St. Landry parish. Work on another, on Big Creek in Avoyelles parish, has just begun.

A total of 59 ramps have been proposed under this A.P.W. program, with funds allocated for each. This includes the 13 which have been completed and those now under construction.

A great deal of work, often very time-consuming, separates a proposal for a boat launching ramp and the actual completion of that ramp. Once funds have been allocated for construction a specific site on the lake or stream must be found, and that tract acquired by lease or preferably purchase. This involves a survey of the ground, title search, and negotiation with the land owner. The Commission then requests the Department of Public Works to draw up a set of plans and specifications for that site, and these plans must be submitted to the Atlanta office of the U.S. Fish and Wildlife Service. After they are approved—frequently after being returned

The Bayou Macon ramp is on La. Hwy. 4 about 10 miles east of Winnsboro. It's a shell ramp with a one-acre parking area.

modification or additional data—bids for construction of the ramp and parking area are called for. If the bids received exceed the money allocated for that project, which they sometimes do, another delay is in the offing.

Many of the proposed ramps are in some phase of this chain of procedure right now.

Site acquisition has been the biggest problem, and many projects are snagged on this obstacle at the present time. Local interests can be of great help in helping the Commission locate desirable tracts of land which might be available.

A.P.W. funds cannot be used for land acquisition, so the Commission is acquiring the sites by outright purchase or by lease. Where possible the ramps are being placed on land leased from police juries, school boards, levee boards, and other governmental agencies, since these should be available to the public for many years.

All leases are for 25 years or more. No fee is paid for such a lease, since construction of a costly, well-designed ramp and parking area enhances the value of adjoining property.

Quite a number of private land owners have recognized this asset by giving the Commission free leases on the required acreage. In doing so they stipulate that the public has free use of the facilities at all times. On land adjacent to the leased ramp site, however, the owner can establish any concession he wishes—boat rental, gasoline sales, bait sales, resort cottages, and the like.

Some established fishing camps have given the Commission a lease on their land, realizing the benefit that will accrue to their business as a result of having this free, public facility nearby.

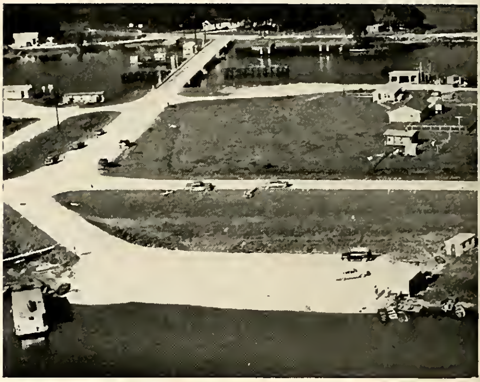
From one to four acres is usually acquired for the ramp and parking area, with a minimum of 100 feet of water frontage necessary. Where more water frontage isn't available, this 100-foot strip is connected with a larger area to be used for parking. One acre can usually accommodate 50 or more car-trailer combinations.

Although some of the first ramps were constructed of shell, all built from now on will be of concrete—minimum 24 feet wide and 6 inches thick. The lower initial cost of the shell ramp is offset by much higher maintenance cost.

One disadvantage of the A.P.W. program is that only those parishes designated as depressed areas qualify. As a result, many excellent locations in the 32 parishes which do not qualify had to be passed up. Although no additional money is in sight for the program at the present time, the Commission is hopeful that funds will become available to expand the boat ramp program into all parts of Louisiana.

Public support for this access program has been great, and use of the ramps already completed is high.

Acquisition of sites for ramps in the following locations has been completed or is imminent: Horseshoe Lake in Concordia parish; Fort Pike in Orleans parish; Black Lake (Section 13) in Natchitoches parish; Atchafalaya River at Butte LaRose in St. Martin parish; Bayou Falcon in Catahoula parish; Black River at Jonesville, Catahoula parish; Old River at Mansura in Avoyelles parish; Pearl River at Hwy. 10 in Washington parish; Pearl River north of Bogalusa, Washington parish; Bonnabel Canal in Jefferson parish; Rosethorn Park in Jefferson parish; Mississippi River at Donaldsonville, Ascension parish; Tensas River at Cooter Point, Franklin parish; Lake Verret in Assumption parish; Calcasieu Lake at Grand Lake, Cameron parish; Little River in Grant parish; Saline Bayou in Catahoula parish; Bayou Lacassine near Lake Arthur in Jeff Davis parish; Lake Arthur at Lake Arthur, Jeff Davis parish; Lake D'Arbonne near Dubach, Lincoln parish; two locations on Cheniere Lake in Ouachita parish; Bayou Des Allemands at Des Allemands, St. Charles parish; Boutte Canal at Boutte, St. Charles parish; South Pass at Manchac, Tangipahoa parish; and three locations on Lake D'Arbonne in Union parish—at north and south ends of the dam and at Bayou Corney.



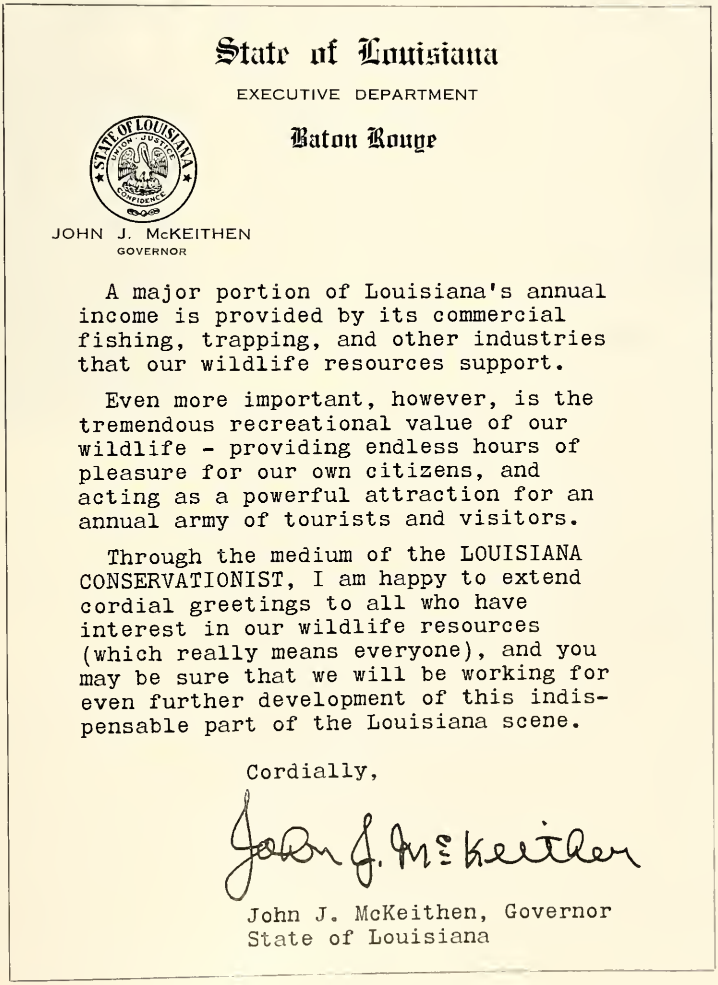
Boat launching ramps are used by those who come to fish, boat and water ski. This ramp is located on Belle River in Assumption Parish.

In addition to the above, funds have been allocated for ramps in the following locations for which sites are *not* available as yet:

Black Lake—Section 15—Natchitoches parish
Iatt Lake in Grant parish
Atchafalaya River at Krotz Springs, St. Landry parish
Upper Anacoco Lake in Vernon parish
Clear Lake in Natchitoches parish
Tchefuncte River in Tangipahoa parish
Old River in Livingston parish
Red River at Lower Brouillette, Avoyelles parish
Belle River at Pierre Part, Assumption parish
Bayou Pigeon at Bayou Sorrel, Iberville parish
Lake Long Canal at Plaquemine, Iberville parish

The boat ramp program, which began little more than a year ago, may prove to be one of the most beneficial ever instituted by the Commission. By unlocking the access door to Louisiana's treasure trove of lakes, streams and coastal waters, it will stimulate private development of recreational facilities, and should prove a real encouragement for visitors to come and sample the aquatic pleasures of our state. ✠

MESSAGE *from the* GOVERNOR



State of Louisiana
EXECUTIVE DEPARTMENT
Baton Rouge

JOHN J. McKEITHEN
GOVERNOR

A major portion of Louisiana's annual income is provided by its commercial fishing, trapping, and other industries that our wildlife resources support.

Even more important, however, is the tremendous recreational value of our wildlife - providing endless hours of pleasure for our own citizens, and acting as a powerful attraction for an annual army of tourists and visitors.

Through the medium of the LOUISIANA CONSERVATIONIST, I am happy to extend cordial greetings to all who have interest in our wildlife resources (which really means everyone), and you may be sure that we will be working for even further development of this indispensable part of the Louisiana scene.

Cordially,

John J. McKeithen

John J. McKeithen, Governor
State of Louisiana

Letters... Questions... Answers... about WILDLIFE *in* LOUISIANA

conducted by Steve Harmon

Dear Editor: Baton Rouge

This is a photograph of little seven year old Keith Swarner of Baton Rouge. He is a real fisherman. He caught these two black bass on False River. One weighed three pounds, the other two pounds, three ounces. They were the best of the string. He caught these two fish January 10, 1964. Hope you can use this picture for your nice magazine.

R. K. SWARNER

Dear Editor: Baton Rouge

Will you please answer these two questions in your next issue. 1. Is there such a thing as a dog that would run anything but a buck deer? How can he tell the difference? The men that think they are authorities on deer hunting call them G-buck dogs. 2. Can you tell a big doe track from a buck track.

W. M. HENDRY

So far as we are able to determine there is absolutely no truth to the story that there is a dog that will run buck deer only. All evidence points to the fact that dogs will run deer indiscriminately whenever they have the opportunity.

In answer to your second question, can a big doe track be distinguished from a buck track, this is extremely unlikely. There are individuals who make such claims but I don't know of anyone being able to prove scientifically that he can do this. Of course, since bucks average larger than does anyone can make a guess and the larger track is more likely to be a buck. As for the actual identification, this would be quite hard to prove, unless an elaborate controlled experiment was set up for this particular purpose.

CHARLES R. SHAW

Dear Editor: Farmerville

Thank you for the very nice write up on D'Arbonne Lake by James T. Davis. Both the parishes of Union and Lincoln have been a most wonderful place for many of us. We have lived here during the greater portion of our years. We agree with Mr. Davis that this area is a wonderful fishing and hunting paradise.

Mr. Davis failed to mention the new airport construction at the Dam Site on Lake D'Arbonne. It will have a runway 4,000 feet with 500 feet approaches on each end. My purpose in writing is to ask you to give credit to the T. L. James Co. for the forty acres necessary for this new addition. I say "hats off' to these fine people.

It is my sincere wish that many will come and help us to enjoy this very fine Lake D'Arbonne.

JOHN E. RABON

Dear Editor: Natchitoches

I would appreciate it very much if you would put this picture in the next edition of LOUISIANA CONSERVATIONIST. This is a picture of the six rabbits we killed on a Saturday evening back in January. Pictured left to right: Buddy Durham, Pink Durham, F. J. Armond.

I would also appreciate it if you would put my grandfather on your mailing list. His address is: Felix Armond, Route 3 Box 82, Robeline, Louisiana.

I enjoy reading the LOUISIANA CONSERVATIONIST and want to thank you for sending it to me.

F. J. ARMOND

Dear Editor: Rayville

I am enclosing photo of an "Alligator-Gar" which was caught in a net in Boeuf River in Richland Parish, January 30, 1964.

The fish was caught by Benny Haynes of Rt. 2, Rayville, La., who is standing on the left in the photo. Helping Mr. Haynes hold the fish is Game Enforcement Agent (1) Frank Burgess. The Alligator-Gar measured 7 feet and weighed 122 pounds.

We thought that you might like to put this in your next issue of the CONSERVATIONIST which

we all read and look forward to.

Assuring you of my cooperation at all times, I am,

EARL E. HILL
Sheriff

Dear Editor: Homer

These fisherwomen are seen with part of a catch of 42 white perch which were caught on Black Lake recently.

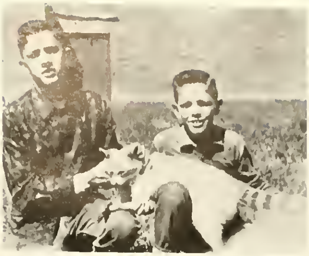
These crappie, we show, weighed two pounds and the rest were very large ones. At left is Mrs. Buelah Mae Shaw and right Mrs. Tillie Whatley of Homer.

MRS. TILLE WHATLEY

Dear Editor: Welsh

We felt that you might be interested in the fact that an albino coon was bagged near Welsh on Saturday, March 14, by Steven Bertrand, 13 year old son of Mr. and Mrs. Milton Bertrand, and a 6th Grade student at Welsh Elementary School.

Pictured with Steven, is a brother, Guy Bertrand.



Steven spotted the coon in a tree near their farm home three miles South of Welsh. At first he was not certain as to the identity of the animal, so he climbed the tree and got near enough to make the identity. He had been cautioned by his father not to corner a treed coon because they would attack to avoid capture. Steven went back to his home and armed with a 12 gauge shotgun bagged his trophy.

The writer encouraged Steven to contact one of the Game Rangers in Jennings and offer the rare specimen to the Conservation Department, which he did. Ranger Louis LeLeaux was notified and the white coon was picked up Saturday afternoon.

C. EDWIN HOWARD
fotog.

Dear Editor: Clarks

Two bobcats caught here in Caldwell Parish by my friend, Willie Ferrand. The one he is shown holding up by the hind legs was the largest of the lot. He measured 52 inches in length and weighed 25 pounds. He caught a total of 28 cats this past fall.

KIRBY ALLEN

Dear Editor: Bogalusa

I want to take part in the National birdbanding program.

I am planning on making taxidermy and conservation my lifetime career. All I love is the outdoors and wildlife. So any information that might help my career on, please let me have copies of it. Especially information on which birds to band and how to band them and where I can get the bands, and catch the birds, and how to catch and transplant squirrels and other animals. I want to receive the LOUISIANA CONSERVATIONIST.

Thank you very much.

KENNETH CARRIER

You did not state your age nor grade in school but anyone who is interested in making a career out of any of the various professions associated with conservation should first acquire all the schooling possible, including at least four years of college and preferably enough more to secure a graduate degree in a specialized field. Information concerning the prerequisites to and the advantages of taking a degree in game management at Louisiana State University may be obtained by writing to the School of Forestry at LSU.

Without both state and federal permits it is illegal to capture birds for banding. Our state laws also forbid you to trap squirrels or other game animals.

We are enclosing some booklets, etc. which should give you additional information.

CHARLES R. SHAW

Dear Editor: Jena

Enclosed is a picture of a 60 lb. Timber wolf (left), killed in La-Salle Parish, 3 miles east of Jena, near Highway 84 Right of Way. The wolf was killed by B. L. (Poo) Walker of Jena.

Since the Timber wolf is becoming increasingly rare in this part of the state we thought this might be of interest to you.

Shown holding the wolf is Jeff Breithaupt of Jena.

HAROLD E. PETERSON

BULL FROGGING IN LOUISIANA

A BULLFROG is many things to many people. To the city dweller who has a summer home on lake or bayou, it is the creature which sings bass in the symphony of wild sound on still summer evenings.

To the gourmet the bull frog represents the main ingredient of a delightful meal.

The commercial frogger also views the bullfrog with food in mind, but with a different slant. He plans to sell it to the gourmet, and use the money for the more prosaic staples of diet.

To the student of zoology the frog is a laboratory specimen.

To the sportsman who leans toward the nocturnal activity of frog "gigging", however, this loud-mouthed amphibian is the excuse for countless nights of pleasure.

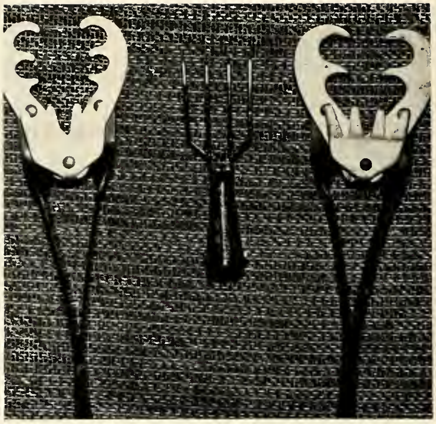
In Louisiana frog "gigging" is illegal, where the term is used to denote spearing the critters with a gig. The law prohibits the use of any devise which punctures the skin or reddens the meat.

With the gig eliminated as a means of capture, froggers have three other methods left: grabs, nets, or their hands.

The grab has two spring-loaded jaws which snap shut when the trigger hits the frog. It is fairly effective on medium to large frogs, but allows small ones to slip through.

If you use a grab make certain that the teeth on the jaws are not sharp, otherwise you will be in violation of the "gigging" provision.

Many expert frog-grabbers use only their hands, but a small frog net on the end of a pole makes it easier to reach those hard-to-get-to spots where frogs are frequently found.



Frog "gigs", like the one in the middle, are illegal since they will puncture the skin. So will a grab like the one on the right, which has sharp teeth. If you use a grab it must have dull teeth, as does the one on the left.

The advantage of grabs, nets, or hands over gigs is that frogs which escape do so unwounded, and undersized ones can be released in good condition.

The size limit on frogs applies only to those taken for commercial purposes. It prohibits the taking of common bullfrogs smaller than 5½ inches in length, or southern bullfrogs smaller than 3½ inches.

There is no limit on the number of bullfrogs which may be taken, but there is a total closed season on taking, selling, or possessing them during the months of April and May.

Most frogging is done at night with the aid of a light. This is legal provided you have no firearm with you.

Fishing for frogs is rarely seen in Louisiana, but is legal and, under certain conditions, effective. This occurs in late summer, usually, when

With gigs prohibited, many grabbers use only their hands.

lakes or ponds shrink in size from evaporation. With their shorelines withdrawn from the edge of the vegetation, bullfrogs can frequently be seen sitting along the bare banks in the daytime.

When this happens a worm—real or plastic—worked slowly along the bank past them will usually get a "strike".

Like other frogs, the bullfrog goes through the three interesting stages of metamorphosis: egg to tadpole to frog. The female frog will lay from ten to twenty thousand eggs, which float on the surface in a cluster that may cover two to five feet.

The eggs hatch into tadpoles, and remain tadpoles for varying periods of time before becoming frogs. For bullfrogs in Louisiana this tadpole stage may be a year or more, while in cold, northern lakes it may be two years.

The bullfrog can adjust its cycle, however, and the tadpoles can transform into frogs at any time after spending at least three months in the water. This frequently happens when a pond dries up in the summer or fall, but these "out of season" baby bullfrogs are much smaller in size at the time of transformation than are those which remain in the water as tadpoles until the following spring.

Not only the human gourmet appreciates the bullfrog. In all stages of life—egg, tadpole, and frog, a great array of natural enemies feed upon the "bullfrog". These include birds, snakes, fish and other frogs.

The tadpole is strictly a vegetarian, but the bullfrog it becomes eats only animal food—insects, frogs, salamanders, young turtles, snakes, mice, birds, worms, and fish.

The bullfrog is an amphibian, a creature of land and of water. It must have both, and the conditions in Louisiana in the early stages of settlement provided ideal frog habitat. Thousands of shallow swamps, plus periodic overflow which left countless small lakes and ponds scattered over the alluvial bottomlands of our river basin, produced bumper frog crops.

Changes in the past few decades, however, haved proved highly detrimental to frogs. Drainage, flood control, and lake building have all been destructive to frog habitat.

Swamps, brakes and sloughs which once reverbrated to the booming notes of bullfrogs have been drained and cleared, in which case all frogs are gone; or have been damned and flooded to form a reservoir, in which case only a token frog population survives around the perimeter.

Dredging, levee building, and stream alignment in the name of flood control have been equally disastrous for bullfrogs, as well as for a host of other wild creatures which depended upon a year-round wetland habitat.

The commercial poundage figures tell a graphic tale.

In 1936 the Louisiana bullfrog production was 2,570,000 pounds, valued at $650,000. In the mid-forties the annual take was 715,514 pounds. In 1961 it was listed as 93,200 pounds.

Many attempts have been made at commercial "bullfrog farming", but best evidence to date indicates no success whatsoever in these ventures. When confined in numbers in concentrated areas bullfrogs have failed to reproduce.

It is possible to stock, or re-stock, areas which are suitable for natural bullfrog growth.

Although the Louisiana frog population is not what it once was, it still ranks second only to that in Florida. That being the case you can always expect that a small army of head-lighted froggers will hit the bayous when the season opens each year on June 1. ✣

A small net on a long handle lets you reach spots like this, and it's also safer where a cottonmouth might have designs on the same frog. Louisiana bullfrogs rank high with both sportsmen and with diners.

Frequent sampling of fish population by use of a seine reveals if bass and bream populations are in the proper ratio for maximum reproduction and continuance of high fish production. It is important that the proper balance of bass and bream be maintained so that neither species will take over the pond to the detriment of annual reproduction.

FARM POND MANAGEMENT

Sammy Stokes

THE PROPER MANAGEMENT of farm ponds in Louisiana requires a considerable amount of time and effort on the part of the pond owner. However, the efforts are surely worthwhile for some of the most productive waters in Louisiana are properly managed fish ponds. It is impossible to discuss every facet of each step in the management of farm fish ponds. For obvious reasons, the following important general management rules have been selected.

There are three factors that should be considered in selecting the pond site. The first is choosing an area with a suitable sized water shed. It should be of a size so as to replenish water losses which occur through evaporation and possible seepage. On the other hand it should not be so large as to cause frequent overflow, thus inducing a loss of fertility and increasing the cost of maintaining a proper fertility level.

The second factor is the depth. The pond should be no less than 5 feet deep in the deepest area; probably six feet being more suitable. It is not important to have water 10 or 12 feet deep in small impoundments as it is seldom utilized. The areas along the shoreline should not be any less than 24 inches in depth. If there is such an area in the pond, care should be taken so as to remove the soil until this depth is acquired around the

One of the initial steps in proper management of a farm fish pond is control of aquatic weeds and grasses. Various chemical sprays are available to combat different types of plant growth to increase fish production of relatively small farm ponds.

complete area. Ponds with areas less than 24 inches deep induce submerged weed growth, thus making undesirable aquatic plants more difficult and more expensive to control.

The last factor in selecting an area is to be sure to pick a site where waters from a creek, bayou, canal, etc. do not back into the pond from below the dam. Waters that back into a pond from below the dam are nearly always a source of undesirable species of wild fishes. Wild fishes have a tendency to upset the balance in pond fish populations and make them much more difficult to manage. It is also important to select an area where muddy water will not run into the pond causing frequent and excessive turbidity. Pond sites selected along gravel roads are frequently victims of these circumstances. Turbid waters reduce the carrying capacity of the pond by reducing the amount of food that can be produced in the pond. Most plankton (microscopic plants and animals) need sunlight to grow. If the sunlight is restricted by turbid waters then it is impossible for a desirable growth of plankton to sustain itself. Plankton is a source of food for insects and fry bluegill which in turn are a source of food for the larger bluegill and bass.

The next step after the selection of the pond site is the construction of the dam to impound water. Probably the best method of obtaining information as to size of the dam to be required, etc. would be to contact your local work unit conservationist of the Soil Conservation Service. Each S.C.S. District Office has personnel with the proper equipment and facilities to assist in designing plans for a dam of proper size, height, spillway capacity, etc. Assuming an impoundment has been constructed with a suitable water shed, the next step would be to stock the area.

The most desirable species to stock ponds with in Louisiana are the bluegill (Lepomis microchirus) and the largemouth black bass (Micropterus salmoides). They are placed in ponds at the rate of 1000 bluegill and 100 bass per acre. Bluegill are planted in the pond in January and bass the following May or June. In certain cases where a pond owner has an impoundment 10 acres, or larger, black crappie are stocked along with the bass and bluegill.

A pond should not be fished for at least one year from the date the bass are stocked. This will give the bass a chance to reproduce before the original stock is harvested. A good rule of thumb to remember in properly fishing an area to maintain a balanced fish population is to harvest 5 lbs. of fish (bluegill) for each lb. of carnivorous fish (bass). For instance if you catch a 3 lb. bass you should catch 15 lbs. of bluegill to maintain a proper balance.

Fertilization is another important factor in managing fish ponds. Fertilizer plays several roles in the proper management of fish ponds. It will tend to increase the carrying capacity of a pond by producing more fish food, help control submerged weeds and in certain cases where a pond is only slightly turbid, fertilizer will have a tendency to flocculate the free floating mud particles, thus causing them to settle to the bottom and clear up the pond.

Fertilization should begin in March or April following the initial stocking of bluegill in January. There is no set amount of fertilizer required for proper management. Amounts will range from 600 to 1200 lbs. per acre per year depending upon the natural fertility of the soil and the weather conditions. It will take less fertilizer in a dry year than in a wet year. A good rule of thumb as to how often fertilizer should be applied following the first application is as follows. Fertilize every two weeks at a rate of 100 lbs. per acre until a 50 cent piece becomes invisible at a depth of 14 inches. The fertilizer should have at least an analysis of 8-8-2; that is 8 lbs. available nitrogen and 8 lbs. available phosphorous, and 2 lbs. available potash for each 100 lbs. of fertilizer. If this analysis cannot be acquired it should be as near this analysis as possible remembering to keep the amount equal with the amount of phosporous.

Weeds in ponds are undesirable in that they furnish cover for bluegill, are a nuisance when fishing and in certain cases when they die and decompose will actually cause extensive fish kills due to oxygen depletion in a pond. Most of them can be controlled by sraying 2-4 D, Endothol, etc., depending upon the species. However, proper fertilization of a pond will tend to control a great many of the submerged weeds.

The preceding are only some broad generalities in managing fish ponds. For any one interested in acquiring more information, there is a pamphlet published by the La. Wild Life and Fisheries Commission that goes into more detail of each step in managing a fish pond. The name of the pamphlet is Managing Louisiana Fish Ponds by Max W. Summers, and it can be procured from any La. Wild Life and Fisheries Commission District Office. I might also add that any one interested in managing fish ponds, there is a project that was initiated by the La. Wild Life and Fisheries Commission in 1955 called the Farm Pond Project. Its purpose and design was to furnish advice toward proper and better management of farm fish ponds. Any one interested in obtaining advice along these lines can acquire an application from any La. Wild Life and Fisheries Commission District Office, fill it out and return it to the address on the bottom of the application. In most cases, parties are contacted personally for pond surveys and assistance in outlining a suitable management plan. Since discussing most of the management of fish ponds, some may be interested as to how fish can be obtained for stocking fish ponds.

Applications for fish can be acquired from District Offices. If the ponds meet the specifications required by the La. Wild Life & Fisheries Commission, the owner's name is placed on file for a shipment of bluegill in January and bass the following May. The fish are delivered in fish transport trucks directly to the pond site at no cost to the owner.

There are some prerequisites by the La. Wild [illegible] [illegible] Fisheries Commission before a pond is [illegible]. The pond must be new (with no present fish population) or if it is an old pond it must be reclaimed by draining or by the use of rotenone or some other chemical. Only in very rare cases there is a recommendation for supplemental stocking, that is stocking ponds with a known fish population.

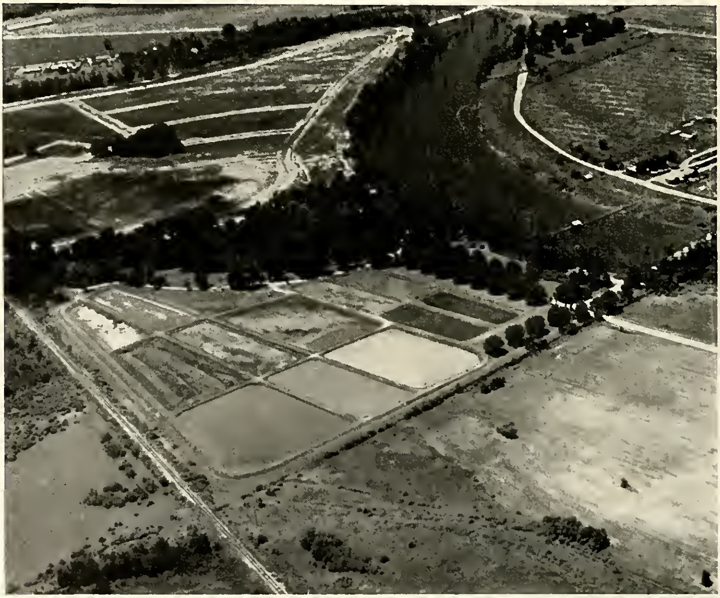
Fish for stocking farm ponds and public areas are produced at three fish hatcheries within the state. The hatcheries are owned and operated by the La. Wild Life & Fisheries Commission and are located as follows: Huey P. Long Fish Hatchery, Lacomb, La.; Beechwood Fish Hatchery, Forest Hill, La., and Monroe Fish Hatchery, Monroe, La.

The species of fish produced in the state owned hatcheries are bluegill (Leponis macrohirus), large mouth black bass (Micropterus salmoides), black crappie (Pomoxis nigromaculatus) and channel catfish (Ictalurus punctatus). The production cycle begins with the bluegill. In June brood bluegill that are kept year round at the hatcheries are paired and placed in ponds that have recently been filled with fresh water. Within two weeks the bluegill will spawn and usually we get the second spawn in September. The fry are cared for right in the spawning ponds. In December or January the ponds are drawn down and the fry are removed and carried to a holding shed where they are graded as to size and weighed. They are then placed in fish transport tanks and taken to their destination.

The ponds that were drained for the bluegill removal are refilled for bass production. Bass are paired and placed in these ponds to spawn. After the bass have spawned in March or April the brood stock are removed with a seine as they have a tendency to feed on the fry. These bass fry are removed from the ponds in May and carried through the same procedures as the bluegill.

The black crappie brood fish are placed in spawning ponds in January and they (brood crappie) are removed in April after they have spawned. The young crappie are held over until the next January because losses are so heavy in May and June when water temperatures are warm. In May the channel catfish are paired and placed in newly filled ponds so that each pair has a container in which to spawn. One hundred lb. grease cans make excellent spawning containers. The channel catfish will not spawn unless they have the semblance of a hollow log, etc. to spawn in. After the female spawns she is removed as she will have a tendency to disrupt the nest. The male will guard the nest until the eggs hatch. After the eggs hatch the schools of catfish are picked and placed in rearing ponds. The catfish, unlike other species reared, are fed supplementary mixed rations containing antibiotics, etc. The catfish are removed from hatchery ponds in January along with the bluegill. The catfish are produced primarily for the stocking of public impoundments. ✠

Aerial view of the state fish hatchery at Monroe. This is one of the three Commission-owned fish hatcheries which rear bass, bream, crappie and catfish. The fish are used by the Commission to restock areas deemed necessary for restocking. Fish are also available to private pond owners upon written request to the Commission.



SECRETARY UDALL TOURS LOUISIANA MARSH REFUGES

SECRETARY of the Interior Stewart L. Udall visited Louisiana May 18 to tour southwest Louisiana with representatives of the Louisiana Wild Life and Fisheries Commission. His main objective on the aerial tour was to inspect State wildlife refuges and also to inspect several million acres of marshland which are being maintained and managed for waterfowl. Later that day he was principal speaker at a testimonial dinner in Lake Charles honoring Rep. T. A. Thompson, chairman of the House subcommittee on fisheries and wildlife conservation.

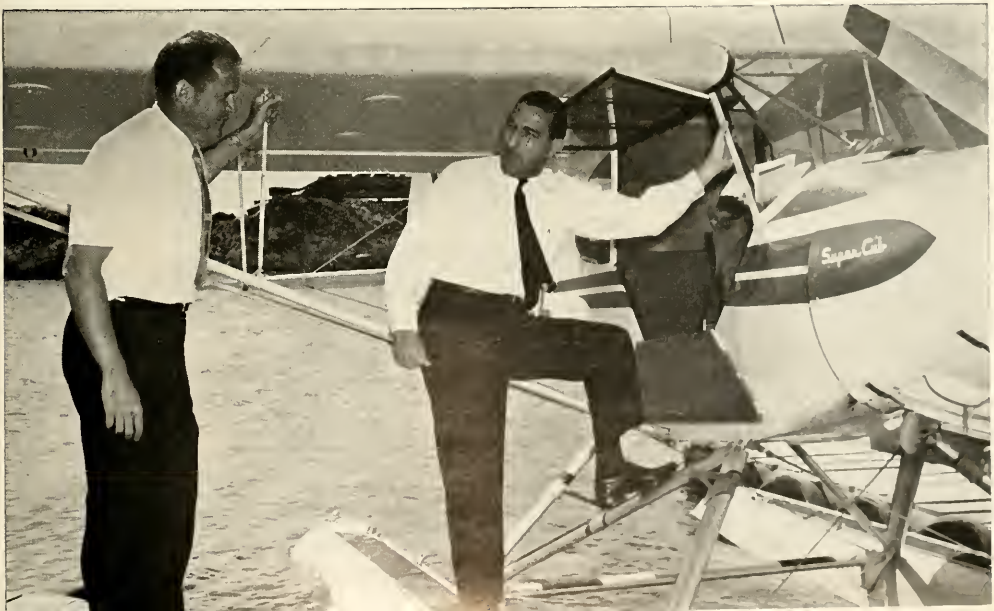
During the course of his tour, Secretary Udall visited Rockefeller Wildlife Refuge, touring the refuge by small seaplane and marsh buggy. Udall was joined at Rockefeller refuge by Rep. Thompson who accompanied him on his tour of the vast refuge which he described as being one of the best managed in the country.

At the testimonial dinner in Lake Charles, Rep. Thompson was presented with a plaque by the Louisiana Wildlife Federation, honoring him for outstanding contributions to the conservation of wildlife and fisheries resources at a national level.

In his dinner address, Secretary Udall praised the Louisiana Wild Life and Fisheries Commission for its outstanding progress in sound conservation and wise utilization of wildlife resources. ✠

One of the highlights of Secretary Udall's visit to Rockefeller Wildlife Refuge was driving a marsh buggy over part of the refuge. Seated beside him is U.S. Rep. T. A. Thompson of Ville Platte, chairman of the House of Representatives subcommittee on fisheries and wildlife conservation. The Secretary of the Interior expressed pleasure at being able to drive a marsh buggy and readily learned how it was one of the prime movers in the Louisiana coastal marshes.

Secretary of the Interior Udall is shown climbing into the cockpit of a light seaplane for a closer look at Rockefeller Wildlife Refuge during his recent visit to Louisiana. Richard K. Yancey, assistant director of the Louisiana Wildlife and Fisheries Commission, is shown with Udall as they prepared to take off and have a low-level look at the water impoundments and water control structures on the refuge. Yancey acted as pilot for Secretary Udall.



SCAUP SCOOP

Robert H. Chabreck

PHOTOS BY THE AUTHOR

WHAT ARE THE migration routes for Louisiana ducks, how long do they live, how many are killed each year? These are questions frequently asked. The answers are not only of great interest to sportsmen but vitally important to persons responsible for managing our wildlife resources.

For many years the Louisiana Wild Life and Fisheries Commission has been seeking answers to these and many more questions regarding Louisiana wildlife. The answers do not come over-night. Rather, many years of planning, field work and analysis are required.

One such study involving the banding of 4,969 lesser scaup has been underway on Rockefeller Refuge in Southwestern Louisiana since early 1960. This study was designed to provide information on the duck now wintering in Louisiana in greatest numbers—the lesser scaup.

The lesser scaup has several aliases: dos gris, bluebill, blackjack, and since 1963, bonus duck. The scaup has increased in recent years and wintering populations in Louisiana now number about 1.5 million. They arrive in October, depart in May and are distributed in all parts of the state, but largest concentrations are found along the coast. Large flocks have been seen in the Gulf as far out as 25 miles, apparently unaffected by heavy seas.

A close relative, the greater scaup, also winters in Louisiana, but in very small numbers. In fact, the use of the name "scaup" alone, usually refers to the lesser scaup.

A banding program was started on Rockefeller Refuge in January, 1960. The first part of this program was instituted as a pilot study, set up to develop ways and means of live-trapping large numbers of birds under the conditions as found on the refuge.

This work was geared primarily at determining the distribution and migration patterns of scaup to and from Louisiana. Also, the data was to be used as a gauge for measuring natural mortality and the hunter's kill.

The technique for trapping scaup was developed soon after the study was begun. The method was quite simple and stemmed mainly on the eagerness of this species to take bait placed around the traps. Once developed, several sites were selected and the trapping begun. The method was refined after it was used over a period of time.

The routine used consisted of daily visits to each trap. The birds in traps were promptly removed and the traps rebaited. Leg bands were attached to all new birds, then the band number and the sex and age of the bird was recorded and the bird released. Records were also kept on birds previously banded and retrapped.

The 1960 banding program was terminated with the beginning of the northward migration. A total of 588 scaup were banded during that spring.

An expanded banding program was planned for 1961. Large concentrations of scaup were located in the Gulf of Rockefeller Refuge during early winter. Normally the scaup move inland in January or February and we had everything set up for their arrival inland. However, the scaup had different plans and remained offshore until the time for migration. As a result no scaup were banded that spring.

The reason for the birds remaining offshore during the period was a big puzzle. In order to find why this happened, several trips were made out into the Gulf and a number of scaup collected. The birds were in excellent condition, with weights averaging about 20 per cent over those found inland and having gullets filled with surf clams.

Bottom samples then taken in that area revealed an abundance of food available for the scaup. The clam found in the gullet, plus several others, were present in amounts often exceeding 200 pounds per acre. The birds, feeding to depths of 25 feet and finding conditions to their liking, apparently preferred to remain offshore.

The banding program was again planned for 1962, but again the scaup remained in the Gulf, coming inshore only when enroute northward. Several techniques were discussed for capturing the birds offshore, but many drawbacks involved in this operation forced us to discontinue the idea.

Conditions changed in 1963 and the scaup moved inland on schedule. The method developed in 1960, with slight modification, was used and by mid-April 1270 scaup departed northward from the refuge carrying new bands.

In 1964 an expanded program was planned and again the scaup moved inland in large numbers. Trapping was begun in mid-January and by mid-April 3111 scaup were banded.

The movement of scaup inland during the spring of 1963 and 1964 is still unexplained, but bottom sampling in the Gulf during the spring of 1964 disclosed an almost complete absence of surf clams.

The 1963 trapping recovered none of the scaup banded in 1960. However, one was captured in March that had been banded as a young bird in July, 1959 in Southern Alberta.

In the course of the 1964 trapping, 27 scaup were recaptured that were banded the previous year on Rockefeller Refuge, and 7 that had been banded in 1960. In addition 10 scaup were captured carrying bands installed elsewhere.

Leg bands are attached to each new bird. This information plus the sex and age of each bird is carefully recorded.

Since the beginning of the banding program, 27 recoveries were reported on scaup banded on the refuge. Of these, 23 were killed and turned in by hunters.

National recovery records show that eleven of the birds were killed in Gulf Coast States, 4 in Midwest, 5 in Canada and 1 in Alaska. The scaup recovered in Alaska was live-trapped and released during a banding operation similar to the one on Rockefeller Refuge.

Scaup banded on Rockefeller Refuge during the spring showed a fairly wide distribution across the Gulf Coast on their return trip the following fall. Banded birds were recovered from South Texas across Louisiana to the western part of Mississippi. Over half of the recoveries from

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Removing ducks from a trap. The ducks are placed in sacks and held for banding.

Pollution Policy

Editor's Note: (The following statement by the Louisiana Wild Life and Fisheries Commission was entered into the records at an Agricultural Department Hearing on Pesticide Regulations at Baton Rouge, April 16, 1963, and again during a similar hearing May 5-6, conducted in New Orleans by the United States Public Health Service, Department of Health, Education and Welfare. It represents the Commission's stand in this matter until further research brings to life more comprehensibe information.)

THE LOUISIANA Wild Life and Fisheries Commission is charged by law with the guardianship, administration, and management of a multimillion dollar commercial fishery and an equally important and valuable recreational and sport fishery. Needless to say, this Commission and the thousands of citizens it represents have become gravely concerned over the recent detection of certain extremely toxic insecticides in the Mississippi River and its distributaries. While at this time it is much too early to assess the extent of the problem with which we are faced, its ramifications, including possible basic changes in bioecology, fishery production, health problems and the regulation of pesticides stagger the imagination.

Basically our concern as a conservation agency deals only with the effect of such toxic materials on the animals themselves, the basic environment supporting the fishery and on total fishery production. Lest it be assumed that the importance of protecting the fishery production is overemphasized, it should be pointed out the total value of the commercial fishery in Louisiana ranges from $75,000,000.00 to $100,000,000.00 annually and furnishes a livelihood for 50,000 or more citizens. Statistically Louisiana produces over 1,000,000,000 pounds of menhaden, 80,000,000 pounds of shrimp, 10,000,000 pounds of oysters, 15,000-000 pounds of fresh water commercial fish 5,-000,000 or more pounds of crayfish and several million pounds of saltwater fish and crabs. It is evident that the value of the commercial fishery in Louisiana both as a food source and economically is equivalent to many important agricultural crops in the State.

Turning to recreational and sportfishing, one tends to find the uninformed frequently less concerned and willing to sacrifice this segment of the natural resources for the sake of well established industries of economic importance. Nevertheless the economic value of the recreational fishery to the state may equal or exceed the value of the commercial fishery. Nearly 1,000,000 citizens fish and spend considerable sums of money in pursuits of their hobby. Furthermore, the millions of pounds of fish caught, in this manner, form a significant part of the food supply of the state.

Perhaps some will want to question the inclusion of salt water fish in the present problem but failure to do so would be the height of folly from a fish management standpoint. Louisiana stands first in fishery production in the Northern Gulf because of the Mississippi River and its vast estuary. It is axiomatic among marine biologists that this great river not only is the prime cause of the fantastic fishery production in Louisiana but also is largely the basic reason that the entire northern Gulf produces 31% of the total fishery production of the United States. Since a high percentage of river water is needed to maintain the moderate salinities in the estuarine nursery areas, permanent and continuous pollution of this great fresh water source could prove disasterous to fish production in this area. All of the marine species making up the fishery products of Louisiana spend some part of their life cycle in the nursery area of the esturary usually during the larval or juvenile stages when they are most susceptible to minimal toxic levels of pollution.

While it is evident at this early stage of investigation that many questions can be posed with few answers available it is essential that the problem be assessed and faced. Following are some of the facts that are known and some of the more obvious questions that must be answered before unrestricted use of insecticides on the watershed of the Mississippi River can be unconditionally accepted:

1. It has been established by laboratory and controlled field experiment that fish, crustacea (including shrimp and crabs) and the various minute plankton forms forming the food chain are extremely sensitive to most of the chlorinated hydrocarbons. Concentrations of endrine, lindane or heptachlor as low as 0.3-0.4 ppb. resulted in 50% mortalities in 48 hours while DDT, chloradane toxaphen and dieldrin are lethal at levels of 1-6 ppb. (Butler and Springer, 1963).
2. Adult oysters are less sensitive to insecticides with respect to mortality rates but the growth rate is reduced by 50% in concentration of .007-0.5 ppm. Of more serious consequence is the fact that mollusks tend to concentrate these toxic materials in their tissues.
3. Possibly the most serious question and one which will take some time to answer is the total effect of minute levels of toxic chemicals on the sensitive eggs, larval forms, reproduction efficiency, and tiny food chain organisms. Since proper function and interrelationship of all of these biological activities are necessary to maintain life and production of a species, a break in the weakest link in the chain would decimate or eliminate a species. Evidence is now on hand to indicate that only traces

of many insecticides will destroy shrimp, oysters and fish larvae. Fish eggs containing insecticide fail to hatch or the fry die immediately after hatching. Little if anything is known of the effects of trace levels of insecticide toxins or plantonic forms making up the base of the food chain. Many of these forms are microscopic and may be extremely sensitive to toxins or conversely may be resistant and concentrate the chemicals only to kill large animals when consumed as food.

4. Arguments will probably wax and wain for some time concerning the amounts of insecticides entering our river systems and estuaries and whether or not the levels are sufficiently high to be dangerous. Nevertheless, it seems unrealistic to assume that insecticides and other pollution products can be continuously added to our water systems year after year without expecting disastrous effects sooner or later. Already it has been demonstrated by the U.S.P.H.S. that since 1957 most of the major river systems in the United States contain measurable amounts of insecticides. The chlorinated hydrocarbons are known to persist for long periods of time, even as much as ten years. (Lichtenstein and Polivka, 1959) Who is to say that bottom muds of rivers and estuaries will not in time become contaminated with unacceptable levels of toxic chemicals? And who can tell how long they will remain contaminated even if the source of pollution was eliminated.

We believe that the recent massive fish kills in the Mississippi River and its estuary attributed to endrine and other pesticides portends things to come. While there has been no reported kills of shrimp this is not surprising. Millions of adult shrimp can die and never be seen and the mortality of larvae would only be reflected in a decimated harvest of adults. These things we do know and cause grave concern. Insecticides have been detected in the Mississippi River and its delta area. Fish kills of marine species have been reported in the delta area. Speckled trout, flounder and other species formally occurring in great numbers in the passes of the river at low water stage have all but disappeared in the past four years. Shrimp production averaging 80,000,000 pounds annually from 1939 to 1956 suddenly has become extremely cyclic for no obvious reason since 1957. During the past six years, excepting 1963, production has been down and during two years reached lows of 30,000,000 pounds. Reduced production has been associated with high rainfall years and high river stages. The one normal year out of six, 1963, occurred in a drought period of low river flow. At present we do not know the answer to this puzzle but our shrimp research program is rapidly being geared to determine the relationship between river water and shrimp production.

In conclusion it is assumed that since this hearing deals with registration and regulations of pesticides that some constructive suggestions for the improvement of present conditions should be made.

This is a difficult task from our point of view because we are not familiar with the mechanics of pesticide regulations. Our position on such matters would be to request of the proper regulatory agency to take whatever steps are necessary to eliminate or reduce the present levels of insecticides to a point where they will pose no future danger to fish and wildlife and to establish and maintain such safeguards as are necessary to prevent future excessive pollution of water supplies. We feel that the extensive fish kills since 1960 clearly point to a condition of excessive pollution and we can expect continuing and perhaps greater fish mortalities in years to come if some action is not taken. Other ramifications of insecticide contamination in the river are only now being intensively investigated and all indications point to the fact that more problem areas will occur if corrective action is not taken. ✻

SCAUP SCOOP

(Continued from page 21)

Louisiana were from the southeastern part of the state.

The data on band recoveries reported by hunters show a very low recovery rate on lesser scaup as compared to certain other ducks. The recovery rate on mallards has been listed at about 8 per cent. However, the first year recovery rate of the 1859 scaup banded in 1960 and 1963 averaged 0.97 per cent. The recovery rate for 1960 bands was 0.85 per cent, while that of 1963 bands increased to 1.02 per cent. The increase in the recovery rate from 1960 to 1963 reflects an increased harvest rate for scaup. Although the basic bag limit was the same both years (4 ducks), a bonus of 2 lesser scaup was permitted on the 1963 birds. Also, permitting only 2 mallards in the bag limit during the 1963-64 season, placed more gunning pressure on scaup. Yet, even with increased gunning pressure the recovery rate increased by only 0.17 per cent.

The small increase in the band recovery rate points out that liberalization on scaup hunting has not greatly affected the kill. Two factors are responsible for the low scaup kill. The first and main factor is that most scaup winter on large lakes, bays and the Gulf of Mexico, and are generally not accessible to hunters. Secondly, most areas where scaup are available are not hunted heavily.

The data on retrapped scaup paint a very interesting picture. It shows that the retrap rate declines only 14.6 per cent annually in subsequent years after banding and is indicative of the annual mortality rate of adult scaup wintering in Louisiana. ✻

1964
TURKEY SEASON

Charles Shaw

DURING THE SPRING gobbler season, held April 4-19, Louisiana sportsmen generally enjoyed a successful wild turkey season. Our wild turkey flocks showed substantial increases, in some areas, and were holding their own under pressure in others.

This is an important game species and carries considerable "prestige" value as a trophy and therefore is considered as "big game" along with the deer. Realizing its importance to the sportsmen of the state, The Louisiana Wild Life and Fisheries Commission has been working toward increasing the state's population of wild turkey.

Management plans, which seem to be paying off in increased opportunity for the hunter, include both protection of the present flocks by enforcement personnel and active trapping and transplanting programs where conditions indicate such actions are feasible. Seasons have been liberalized as population growth permits and new areas will be opened to turkey hunting as the population expansion warrants.

Of the known kill, actually checked by Enforcement and Fish and Game Divisions personnel, where the birds were seen and the name and address of the successful hunter known, the Florida parishes accounted for 165 gobblers and the northeastern part of the state had 95.

Ranked in order of the number of verified kills, the parish list is as follows: St. Helena—39, Livingston—38, Morehouse—34, Madison—30, East Feliciana—25, St. Tammany—24, Washington—23, Tensas—13, Union—12, Tangipahoa—10, and East Baton Rouge and Franklin tied at six kills each. Thus, we see that the turkey hunting has been spread out over 12 parishes, seven in the southeastern part of the state and five in the northeastern portion of Louisiana. As always, reports continue to drift in and we know from past experience that a few more birds were harvested than could be verified during the period of the hunting season. Most of these will be reported and/or checked out later and thus the final kill figures will be somewhat higher than the early reports indicated.

District II office located at Monroe reports that the turkey hunters were well satisfied with the results in their area and noted a marked increase in hunting and success in Morehouse parish, which has moved into third place behind St. Helena and Livingston, in verified kills. Hunters moved into the Chicago Mills GMA located in District IV from throughout the state, 865 permits having been issued by the District offices.

Records indicate that 22 gobblers were killed on the Chicago Mills Game Management area. Other management areas are scheduled for turkey development and it is hoped that it will be possible to make similar hunts on a number of these areas in the future. ✠

Nolan Rabb, Sr. of Waterproof, with a 19 lb. gobbler killed on Chicago Mills Game Management Area in Tensas parish on April 6, 1964.

A 17 lb. gobbler killed on Chicago Mills Game Management Area near Big Roaring Bayou in Franklin parish on April 4, 1964 by B. W. Roberts of Winnsboro.

The Bird of the month

WHITE-EYED VIREO

Viere griseus

Charles R. Shaw

THE VIREOS are small insect eating birds, usually not quite as slender in form and bill as the warblers, but apt to be confused with them or small fly-catchers by novice bird watchers.

The white iris which gives the bird its name is a distinctive mark, of course. However, if this cannot be clearly seen then the combination of the yellowish eye-ring and the two whitish wing bars help to distinguish the White-eyed Vireo from its relatives. The upper parts are a grayish green or greenish gray and the underparts are white with a yellowish tinge, the latter extending onto the sides.

The vireos are usually on the secretive side, preferring to stay in among the brush and trees rather than staying out in the open for any length of time. This, of course, ties in with their feeding habits which primarily consist of cleaning off small insects, caterpillars, etc. from the leaves and twigs of trees and bushes. This is an active bird, continually moving around and also a bit inquisitive. The latter trait is used by bird watchers who can "squeak" the vireo out into a more open place by tantalizing it into searching for the source of the sound. It will probably be scolding while looking around.

The regular song of the White-eyed Vireo is not considered typical of the family consisting of several distinctive notes. There may be considerable individual variation and the same bird may also vary its song. It is somewhat of a mimic and may interrupt its regular song to indulge in a bit of mimicry.

Although not conspicuous, this is a common bird in its favorite habitat which consists of brushy thickets and undergrowth. Quiet watching and listening in such areas should reveal the birds presence without too much effort. The song, once learned, is a good guide to locating the bird.

The nest of the White-eyed Vireo may be a little more bulky than one would expect for a vireo and is usually located only a few feet from the ground in a bush or low tree. The nests are typical in structure, being hung by the edge from a fork near the end of a limb, often in a thick bush or thicket, giving a prehensile effect rather than being jammed solidly into a crotch near the trunk of a tree. Many materials may be used, including spider web, vegetable fibers or other flexible material, including sometimes strips of newspaper. The three or four eggs are white with a few small brown spots.

Vireos are one of the families of birds which are parasitized by the cowbird which lays its eggs in other birds nests to avoid the cares of bringing up a family. If the vireo has not started laying, it may cover the egg with a false floor and lay more eggs on top. If undisturbed, the young cowbird hatches early and being larger and stronger gets the major portion of the food and starves out the rightful progeny, even shoving them out of the nest at times. Fortunately these little avian tragedies are not common enough to hold down the vireo population. Then too, vireos often nest a second time during the season and thus can catch back on any losses sustained for any reason.

The male White-eyed Vireo is a helpful husband where the family is concerned and does his part in feeding and taking care of the one or two broods which are raised during the summer. This is a typical vireo trait.

These cheerful and interesting birds are quite an economic asset due to their food habits which consist largely of small caterpillars, ants, larvae, of various insects, etc. gleaned from the trees and bushes in which they stay. While it is, of course, impossible to even estimate the population of a species such as this, the birds are quite common during the summer months and are very busy with their task of devouring as much small insect life as possible.

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LOUISIANA FRESHWATER FISHING

BEST IN NATION

Silhouetted against an inviting background, this typical Louisiana fisherman is engaged in recreational fishing. With its vast network of rivers, streams and lakes, Louisiana offers freshwater fishing in almost every part of the state. Probably no other state offers more opportunity for recreational fishing than Louisiana. It is estimated that one out of every three persons in the state fishes for sport.